

CASE STUDY:**STEELING AWAY INTO A DIFFERENT STRUCTURE***

From the days of Andrew Carnegie and the other steel barons to the late 1960s, the steel industry was dominated by large, vertically integrated companies. The industry existed in a stable environment and the rate of technological advance was steady and gradual. If steel manufacturers could produce steel of good quality at a reasonable price, it could be sold.

Excelsior Steel is 125 years old, employs 2,200 and makes 250,000 tons of steel a year. Located in Northern Indiana, it is housed in a huge plant that consolidated all operations under one roof. Excelsior had a centralized, hierarchical structure. From its offices in downtown Gary, top management, with the aid of engineering, made decisions regarding the products Excelsior would manufacture and the level produced. Separate departments handled manufacturing, marketing, metallurgy, field sales, and support for these units. Over the years, top managers forged close contacts with unions, and the unions often worked with Excelsior to determine work rates and how the work should be done.

But all that changed starting in the late 1970s. The inflation of that period, coupled with the recession that followed it and fierce competition from Germany, Japan, and Brazil, brought Excelsior to the edge of bankruptcy. Excelsior was in danger of following many of the other steel giants that lined the southern edge of Lake Michigan out of the steel business. But Excelsior did not become another of those huge abandoned buildings north of Hammond, Indiana. Instead it took aggressive steps to solve problems.

After extensive diagnosis, Excelsior's managers found that their products were no longer keeping pace with the market, 60 percent of the firm's orders ran behind schedule, and profits were eaten up by materials, energy, and labor costs. In this more turbulent environment, the stable, hierarchical structure was not nimble enough. Moreover, technological advances had rendered much of Excelsior's plant outdated. Smaller furnaces equipped with the latest computer-assisted manufacturing devices could turn out many of Excelsior's products at a much lower cost.

In conjunction with outside experts and the union, management at Excelsior concocted a strategy to save the plant. The strategy hinged on shifting production to high-value products tailored for separate markets, while upgrading technology and research.

To get started, Excelsior set up three product task forces: sheet metal, special alloys, and open-die forgings. These task forces had representatives from all departments involved in the products and their charge was to determine how each product could be produced in an independent product group. The task forces formed the basis for permanently integrating teams headed by product managers, each of which was responsible for all aspects of one of the three product areas, including sales. Each product area was also responsible for introducing new products and trimming products that were not successful.

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Over time, there were so many orders for different types of specialty steel that the special alloys group subdivided into multiple project teams, instituting a mini-matrix structure within the group. Since it was important to keep the personnel in the special alloys groups trained in the latest technology and metallurgical research, the functional departments assumed increased importance. Functional managers, such as the manager of metallurgy, were responsible for keeping abreast of the latest technical developments and for keeping personnel trained. These personnel were then assigned to one or more projects, under the supervision of the project manager. This structure greatly enhanced communication both within and between specialties.

Excelsior installed electronic mail and voice mail when it implemented an order and inventory tracking system. These greatly increased the ability of Excelsior's employees to keep in touch with each other and increased the flow of ideas. Along with this, Excelsior created a program to cultivate new ideas in which employees who had brainstormed could set up project teams to develop them, provided they could make a good case with the management team. From this program came several new product lines.

Implementation of this new structure was not painless. The company had to lay off workers, because the three product lines did not require as many employees as Excelsior had in its heyday. By the end of the reorganization, Excelsior had only 1,300 employees; however, as production increased it hired back about 300 more. Many of the laid-off employees were replaced by technology. The union still hung on, but union and management were much less adversarial than in the past. Union and management worked together to reorganize the plant. Middle managers and foremen were especially confused by the transition to product units and the matrix-based structure. Not accustomed to dealing with ambiguity, they initially resisted the increased number of meetings and negotiation required. Over time the most disgruntled managers and foremen retired, and the new structure, which emphasized horizontal and integrative links as well as vertical communication took over. Many of the managers who initially resisted this shift have found it to be a growth experience; they try to involve younger employees in new product development and problem-solving to develop them for the future.

Excelsior Steel is now back on track. Deliveries are on time better than 95 percent of the time. An average of twenty new products are introduced each year and profits are up. Market share has recovered as well. Excelsior employees gladly embrace their new motto, "Change or Die."

Applying What You've Learned

1. How did Excelsior respond to changes in its environment and technology? Which of the integrating methods did Excelsior use?

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